

In the Claims:

Please amend the claims as follows:

1. (currently amended) A power capacitor, comprising:

at least one capacitor element (~~2a-2d~~) enclosed in a substantially cylindrical container (~~1, 22-22e~~) of a material that substantially comprises a first polymer material, and wherein the container (~~1, 22-22e~~) on its envelope surface comprises a plurality of protrusions (~~23-23e~~) designed to extend the creepage distance along the container, characterized in that wherein the protrusions (~~23-23e~~) are substantially of a second polymer material, and that wherein the protrusions are formed with respect to their thickness and radial length so that they cool the capacitor.

2. (currently amended) A The power capacitor according to claim 1, characterized in that wherein the protrusions (~~23-23e~~) comprise at least one protrusion (~~23e~~) with a thickness (~~t2~~) in the interval of 0.2-10 mm and a radial length (~~L2~~) in the interval of 5-50 mm.

3. (currently amended) A The power capacitor according to claim 2, characterized in that wherein the protrusions (~~23-23e~~) comprise at least one protrusion with a thickness (~~t2~~) in the interval of 1-4 mm and a radial length (~~L2~~) in the interval of 10-25 mm.

4. (currently amended) A The power capacitor according to any of the preceding claims, characterized in that claim 1, wherein essentially the whole envelope surface of the power

capacitor is covered with a plurality of the protrusions (23-23e).

5. (currently amended) A The power capacitor according to claim 1, characterized in that wherein the protrusions (23-23e) comprise a plurality of smaller protrusions (23e, 23d) with a thickness (t2) in the interval of 0.2-10 mm and a radial length (L2) in the interval of 5-30 mm, and that wherein the small protrusions (23e, 23d) are arranged in the vicinity of at least one larger protrusion (23e) with a thickness (t3) in the interval of 2-10 mm and a radial length (L3) in the interval of 20-60 mm.

6. (currently amended) A The power capacitor according to claim 5, characterized in that wherein the protrusions comprise a pattern with a plurality of smaller protrusions (23d) and at least one larger protrusion (23e), and that wherein the pattern is repeated along essentially the whole envelope surface of the capacitor.

7. (currently amended) A The power capacitor according to claim 6, characterized in that wherein 10-20 smaller protrusions (23d) are arranged in the vicinity of at least one larger protrusion (23e).

8. (currently amended) A The power capacitor according to any of the preceding claims, characterized in that claim 1, wherein the protrusions are arranged with an axial pitch (a2) in the interval of 5-25 mm.

9. (currently amended) A The power capacitor according to any of the preceding claims,

~~characterized in that claim 1, wherein~~ the capacitor element/s (2a–2d) is/are enclosed in at least one insulating medium (10, 21, 21a) which is in a state different from a liquid state within the working temperature interval of the capacitor.

10. (currently amended) A The power capacitor according to ~~any of the preceding claims, characterized in that claim 1, wherein~~ the first polymer material and the second polymer material are of the same kind of polymer materials.

11. (currently amended) A The power capacitor according to ~~any of the preceding claims, characterized in that claim 1, wherein~~ the insulating medium (10, 21, 21a), the container (1, 22–22e) and the protrusions (23–23e) of the container are all for the most part of rubber, preferably silicone rubber.

12. (currently amended) A The power capacitor according to claim 11, ~~characterized in that wherein~~ the insulating medium (10, 21, 21a), the container (1, 22–22e) and the protrusions (23–23e) of the container are of the same kind of rubber.

13. (currently amended) A The power capacitor according to ~~any of claims 1–10, characterized in that claim 1, wherein~~ the insulating medium (10, 21, 21a), the container (1, 22–22e) and the protrusions (23–23e) of the container are all for the most part of a thermoset.

14. (currently amended) A The power capacitor according to claim 13, ~~characterized in that wherein~~ the insulating medium (10, 21, 21a), the container (1, 22–22e) and the protrusions

(~~23-23e~~) of the container are of the same kind of thermoset, and ~~that wherein~~ the thermoset is based on one of the following materials: epoxy, polyurethane, polyester.

15. (currently amended) A The power capacitor according to ~~any of claims 11-14~~, characterized in ~~that claim 1, wherein~~ the insulating medium (~~10, 21~~), the container (~~1, 22-22e~~) and the protrusions (~~23-23e~~) of the container are injection-moulded molded in one single piece.

16. (currently amended) A The power capacitor according to ~~any of claims 1-9~~, characterized in ~~that claim 1, wherein~~ the container (~~1, 22a-22e~~) and the protrusions (~~23a-23e~~) of the container are of different polymer materials.

17. (currently amended) A The power capacitor according to claim 16, characterized in ~~that wherein~~ the container (~~1, 22a-22e~~) is of polyethylene and the protrusions (~~23a-23e~~) are of silicone rubber or EPDM.

18. (currently amended) A The power capacitor according to claim 16, characterized in ~~that wherein~~ the container (~~1, 22a-22e~~) is of fibre-reinforced thermoset and the protrusions (~~23a-23e~~) are of silicone rubber or EPDM.

19. (currently amended) A The power capacitor according to ~~any of claims 16-18~~, characterized in ~~that claim 16, wherein~~ the insulating medium (~~10, 21, 21a~~) is silicone in gel state.

20. (currently amended) A The power capacitor according to ~~any of claims 16-18, characterized in that claim 16, wherein~~ the insulating medium (~~10, 21, 21a~~) is based on a thermoset.
21. (currently amended) A The power capacitor according to ~~any of the preceding claims, characterized in that claim 1, wherein~~ the capacitor comprises at least one tubular element (~~20~~) running in the cylinder direction and extending through each capacitor element (~~2a-2d~~).
22. (currently amended) A The power capacitor according to claim 21, ~~characterized in that wherein~~ the tubular element (~~20~~) is reinforced by armouring the tubular element.
23. (currently amended) A The power capacitor according to ~~any of the preceding claims, characterized in that claim 1, wherein~~ the container (~~1, 22a-22e~~) is reinforced by armouring the container.
24. (currently amended) A The power capacitor according to ~~any of the preceding claims, characterized in that claim 1, wherein~~ a diffusion layer is arranged on at least the inside of the container (~~1, 22a-22e~~).
25. (currently amended) A method for manufacturing a power capacitor comprising at least one capacitor element (~~2a-2d~~) enclosed in a substantially cylindrical container (~~1, 22a-22e~~) made of a material that substantially comprises a first polymer material, and wherein the

container (1, 22a-22e) on its envelope surface comprises a plurality of protrusions (23-23e) designed so as to extend the creepage distance along the container, characterized in that the protrusions (23-23e) are made of a second polymer material, that the protrusions (23-23e) are formed with respect to their length and width so that they cool the capacitor, and that the capacitor element/s is/are encapsulated in a container (1, 22a-22e).

26. (currently amended) A The method according to claim 25, characterized in that further comprising:

bringing the capacitor element/s (2a-2d) ~~is/are brought~~ to be enclosed in at least one insulating medium which is in state other than liquid state within the working temperature interval of the capacitor.

27. (currently amended) A The method according to claim 26, characterized in that wherein the manufacture of the container, the application of the protrusions, the encapsulation of the capacitor element/s and the enclosure in the insulating medium are achieved by injection moulding molding.

28. (currently amended) A The method according to claim 27, characterized in that wherein the material is rubber, preferably silicone rubber.

29. (currently amended) A The method according to claim 27 or 28, characterized in that 27, wherein the injection moulding molding occurs in one single step and with one single material.

30. (currently amended) A The method according to claim 27 or 28, characterized in that 27, wherein the injection ~~moulding~~ molding occurs in two steps, whereby in a first step the capacitor element/s (2a-2d) is/are enclosed in the insulating medium and in a second step the container (1, 22-22e) is manufactured, and the protrusions (23a-23e) are applied, and wherein in the first step a polymer material is used as material which has lower viscosity than the polymer material that is used in the second step.

31. (currently amended) A The method according to claim 25, characterized in that wherein a cylindrical polymer tube is provided for forming the container (1, 22-22e), that wherein the protrusions (23a-23e) are applied to the polymer tube, whereby the tube is preferably of polyethylene, and that wherein the capacitor element/s (2a-2d) is/are placed in the polymer tube.

32. (currently amended) A The method according to any of claims characterized in that claim 25, wherein each capacitor element (2a-2d) prior to injection ~~moulding~~ molding is applied to a tubular element (20) extending through each capacitor element.

33. (currently amended) A The method according to of claim 32, characterized in that wherein the tubular element (20) is reinforced by armouring.

34. (currently amended) A The method according to any of claims 31-33, characterized in that claim 31, wherein the protrusions (23a-23e) are applied to the container (1, 22a-22e) by

injection ~~moulding~~ molding, by winding them in a spiral around the container, or by providing them as prefabricated sleeve-like elements which are threaded onto the container.

35. (currently amended) A The method according to ~~any of the preceding claims,~~  
~~characterized in that~~ claim 25, wherein the container (~~1, 22-22e~~) is reinforced by armouring.

36. (currently amended) A The method according to ~~any of the preceding claims,~~  
~~characterized in that~~ claim 25, wherein a diffusion layer is applied to at least the inside of the container (~~1, 22-22e~~).

37. (currently amended) A The method according to claim 34, ~~characterized in that~~  
wherein at least the outside of the container (~~1, 22-22e~~) is coated with silicone before the protrusions are applied.

38. (currently amended) A The method according to claim 31, ~~characterized in that~~  
wherein the protrusions are applied to the container (~~1, 22-22e~~) by injection ~~moulding~~ molding and ~~that~~ wherein the container is surface-modified prior to the injection ~~moulding~~ molding.

39. (currently amended) A The method according to ~~any of claims 31-38, characterized~~  
~~in that~~ claim 31, wherein a mechanical support is applied for the container prior to the injection ~~moulding~~ molding.

40. (currently amended) Use of a power capacitor according to ~~any of claims 1-24~~ claim

1 at voltages exceeding 1 kV, preferably at least 5 kV.

41. (currently amended) Use of a power capacitor according to ~~any of claims 1-24~~ claim  
1 in a system for transmission of alternating current (AC).